

# How can I use the PMT function in Excel to calculate loan payments?

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## RECOMMENDED CITATION

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The PMT function in Excel is a useful tool for calculating loan payments. This function allows users to easily determine the fixed payment amount for a loan, based on the loan amount, interest rate, and term. It can be accessed by typing "`=PMT()`" into a cell and filling in the required information. By using this function, individuals can accurately plan their budget and make informed decisions about their loan payments. Additionally, the PMT function can be used to compare different loan options and determine the most suitable one. Overall, the PMT function in Excel is a valuable tool for anyone looking to calculate loan payments efficiently and accurately.

**PMT**, one of the [financial functions](#), calculates the payment for a loan based on constant payments and a constant interest rate.



Use the [Excel Formula Coach](#) to figure out a monthly loan payment. At the same time, you'll learn how to use the PMT function in a formula.

## Syntax

`PMT(rate, nper, pv, , )`

**Note:** For a more complete description of the arguments in PMT, see the PV function.

The PMT function syntax has the following arguments:

**Rate** Required. The interest rate for the loan.

**Nper** Required. The total number of payments for the loan.

**Pv** Required. The present value, or the total amount that a series of future payments is worth now; also known as the principal.

**Fv** Optional. The future value, or a cash balance you want to attain after the last payment is made. If *fv* is omitted, it is assumed to be 0 (zero), that is, the future value of a loan is 0.

**Type** Optional. The number 0 (zero) or 1 and indicates when payments are due.

| Set type equal to | If payments are due            |
|-------------------|--------------------------------|
| 0 or omitted      | At the end of the period       |
| 1                 | At the beginning of the period |

## Remarks

The payment returned by PMT includes principal and interest but no taxes, reserve payments, or fees sometimes associated with loans.

Make sure that you are consistent about the units you use for specifying rate and nper. If you make monthly payments on a four-year loan at an annual interest rate of 12 percent, use 12%/12 for rate and 4\*12 for nper. If you make annual payments on the same loan, use 12 percent for rate and 4 for nper.

**Tip** To find the total amount paid over the duration of the loan, multiply the returned PMT value by nper.

## Example

Copy the example data in the following table, and paste it in cell A1 of a new Excel worksheet. For formulas to show results, select them, press F2, and then press Enter. If you need to, you can adjust the column widths to see all the data.

| Data                     | Description   |              |
|--------------------------|---|--------------|
| 8%                       | Annual interest rate  |              |
| 10                       | Number of months of payments  |              |
| \$10,000                 | Amount of loan  |              |
| Formula                  | Description   | Result       |
| =PMT(A2/12,A3,A4)        | Monthly payment for a loan with terms specified as arguments in A2:A4.  | (\$1,037.03) |
| =PMT(A2/12,A3,A4,,1)     | Monthly payment for a loan with with terms specified as arguments in A2:A4, except payments are due at the beginning of the period. | (\$1,030.16) |
| Data                     | Description   |              |
| 6%                       | Annual interest rate  |              |
| 18                       | Number of months of payments  |              |
| \$50,000                 | Amount of loan  |              |
| Formula                  | Description   | Live Result  |
| PMT(A9/12,A10*12, 0,A11) | Amount to save each month to have \$50,000 at the end of 18 years.  | (\$129.08)   |